

Case Study No. 10 | March 2018

Extended shelf-life: building sustainable supply chain management



The Maternal, Newborn and Child Health Programme in Northern Nigeria (MNCH2) is a UK government-funded five-year programme designed to improve maternal and child health across six states – Jigawa, Kaduna, Kano, Katsina, Yobe and Zamfara. Most maternal and newborn deaths are preventable. A sustainable and accessible drug supply has been proven to saves lives, and Supply Chain Management (SCM) is one service delivery area where key changes in efficiency and integration can create real life-saving change.

For example, according to the World Health Organization, infection is one of the top three killers of newborns, particularly infections via the umbilical cord, which are frequent, deadly yet completely preventable. Access to chlorhexidine, a simple anti-bacterial gel, can prevent deaths due to umbilical cord infections, and effective SCM is critical in making sure this product is readily and consistently available.

1 Pharmacist Awwalu Abdullah at the Kano DMCSA and a Store Officer take stock of RMNCH commodities.



NEONATAL MORTALITY RATE BY MNCH2 STATE ^{1,2} – PER 1,000 LIVE BIRTHS



I. The probability of dying within the first month of life, expressed deaths per 1,000 live births

2. National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). 2017 Multiple Indicator Cluster Survey

2016-17, Survey Findings Report. Abuja, Nigeria: National Bureau of Statistics and United Nations Children's Fund; pg. 28.

Strengthening health systems

To ensure essential Reproductive, Maternal, Newborn and Child Health (RMNCH) drugs and commodities are readily available at critical service delivery points, MNCH2 is supporting human capacity and physical improvements to state supply chain structures. This support has led to improvements in provision of integrated RMNCH services across the participating states and continuous availability of commodities at critical service delivery points within the health care supply chain.



Identifying challenges

To provide the requisite support, MNCH2 had to first review the existing situation, which identified a number of endemic challenges. The assessment of state health care facilities found the barriers to a sustainable supply chain were not just common across the intervention states, but in the Nigerian health systems as a whole.

Key Supply Chain Challenges:

- Non-uniform or non-existent Logistics Management Information Systems (LMIS), tools, reporting processes and standards
- Inconsistent and uncoordinated reporting and re-supply practices for warehouse management
- Poor inventory control, with frequent commodity stock-outs
- Logistics for RMNCH, Family Planning and Vaccine programmes are run in parallel and not integrated with Central Medical Stores
- Physical condition of State and Local Government Area (LGA) stores often inadequate to allow for integration

Sub-optimal supply chains have a direct effect on the system and deny patients their needs, thus decreasing confidence in the system. Previously, distribution mix-ups were common, as was rampant pilferage and proper inventory was difficult to maintain with issues of understocking, overstocking/wastages and stock-outs.

In fact, prior to MNCH2's engagement, the baseline for RMNCH drug and commodity stock levels was set at only 1%, and it was generally found that even this target was not being met. This was due to an almost non-existent integrated service delivery approach to SCM.

Successive programmes had different approaches and different supply chain systems, without a sustainable approach for skills and knowledge transfer to state staff. Therefore, at the end of each programme, states typically fell back to a zero-level stock of commodities and would stay at that level until a new programme commenced.

Institutionalising sustainability

To tackle the challenges identified in the assessment, a series of interventions were designed to support states in building more effective operations within their RMNCH supply chains and to institutionalise sustainability. At the root of the exisiting barriers was poor data management – human capacity and systems; therefore, MNCH2 has focussed its efforts on improving data recording skills through institutionalised capacity building and improving reporting and monitoring systems.





FACILITIES TRAINED ON STANDARD OPERATING PROCEDURES BY MNCH2

	LGAs	General Hospitals	Comprehensive Health Centres	Primary Health Care centres	Total health facilities trained
Jigawa ³	27	12	0	150	162
Kaduna	23	23	0	115	138
Kano	44	25	9	230	264
Katsina	34	16	29	159	204
Yobe ⁴	17	11	4	75	90
Zamfara	14	14	0	77	91

Standard Operating Procedures – creating consistency

To drive efficiency of supply chain management and logistics, data collection and recording and improvement of controls, Standard Operating Procedures (SOPs) were revised or developed in each of the intervention states.

Adhering to SOPs better equips the states to identify accurate consumption patterns, which in turn improves the reliability of data from the health-facility level up to decision-makers to ensure the stock levels to meet demand.

Good data is essential. So as a part of the SOPs, MNCH2 has worked with the states to develop improved and usable LMIS monitoring tools. The states have received best practice job-aids and training on the tools and hard copies have been distributed to all LGAs in supported states.

The SOP data issues addressed extended to efficient data capture and monitoring of RMNCH drug and commodity distribution. As a result, MNCH2 helped the states move from a 'push' to 'pull' approach, whilst working with states to integrate improved data quality management with existing distribution models. The 'pull' approach ensures optimal usage of commodities, avoiding understocking, overstocking/wastages, and stock-outs.

DISTRIBUTION MODELS

Push (old approach): commodities are allocated from the top/centre, based on historic patterns of how much stock has previously been provided to a location

Pull (new approach): a bottom-up approach informed by data based on actual consumption patterns, so that stock requisition matches the exact quantity of items needed

Improving capacity through Master Trainer Mentors

Prior to MNCH2, training on SCM was tied to donor programmes and occurred piecemeal, resulting in scattered capacity across supported facilities and states. To alleviate this continunity problem MNCH2 introduced a strategy of using Master Trainer Mentors (MTMs).

Intense training on integrated logistics management, information systems and integrated commodity management is facilitated by MNCH2 with the MTMs, who are responsible for conducting step-down training to Local Training Teams (LTTs). Each supported state has six MTMs, whilst each LTT is comprised of four key personnel – the Cold Chain Officer, the Local Government Monitoring and Evaluation Officer, and Government Store Officers, and the Essential Medicine or Maternal Child Health (MCH) Officer.

The LTTs are then responsible for the further localisation of skills through further step-down trainings within their local government down to the ward-level. These localised trainings are then followed-up with on-the-job trainings and spot checks, thus creating an institutional capacity within the entire SCM structure.

The inclusion of the Primary Health Care (PHC) centres creates local ownership, as well as a reliable data resource for government. The role of PHCs in SCM is a shift from the previous situation where capacity was almost non-existent. Now, with PHCs trained, states can be confident that client commodity and drug needs are being properly met.

The use of MTMs and the step-down model has helped to institutionalise and standardise capacity at state, LGA and PHC levels, resulting in a critical mass of trained staff; which has been adopted by the federal and state Ministries of Health.

Jigawa state has no Comprehensive Health Centres, instead it has three categories of PHCs: Health Centres, Health Clinics and Health Posts.

^{4.} Please note 12 supported Health facilities and 2 Local Government Areas were not trained due to insurgency activities

2,000+ people have received training through the MTM step-down model since the inception of MNCH2."

Furthermore, adoption of the MTM model has also improved the sharing of best practices across states. In Jigawa, the Drug and Medical Consumables Supply Agency (DMCSA) has worked directly with supplier organisations by asking them to donate vehicles to ease transportation shortages. This successful engagement of suppliers is now being explored by Kano's DMCSA.

The use of step-down trainings has aided the integration of health services by bringing together a variety of stakeholders, many of whom have been able to work and learn together for the first time, including those responsible for Healthy Timing and Spacing of Pregnancies (HTSP) commodities, vaccines, essential medicines, and cold chain management.

Improving infrastructure

Whilst data quality, human capacity and processes are at the forefront of improving the supply chain, sound infrastructure is also critical to a stable supply chain. The less than satisfactory condition of many of the health facilities, PHC centres, and drug stores proved a challenge in the past as many were not in a usable state. To address this problem MNCH2 undertook infrastructural upgrades across the intervention states in selected health facilities and stores touching every LGA. As of the end of year four of MNCH2, 411 facilities in the six states had been refurbished and/or upgraded.

Generating results

Since the engagement of MNCH2, there has been a steady improvement across many indicators associated with supply chain management, with particular improvement in the achievement of minimum stock levels.

DOCUMENTING PROGRESS: THE RISE IN STOCK LEVELS



With improved capacity, systems and infrasturcture, there is a renewed commitment, at all levels, to effective monitoring and evaluation (M&E) to capture relevant data and to reporting in a timely and regular manner. The data now being collected is accompanied by monthly meetings at the LGA-level and coordinated by the LGA M&E Officer who aggregates data from all facilities, then attends monthly state-wide meetings to provide status updates and share successes.

This level of coordination was not being practiced prior to MNCH2's interventions, but through the integration of LMIS at all levels of SCM, coupled with intense human capacity building, a new culture of reliable data capture and reporting, along with a functional and sustainable SCM system have been created.





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